Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Central Montana Resources, LLC
Well Name/Number: Firefoot No. 1B
Location: NW NE Lot 2 Section 1 T13N R25E
County: Petroleum **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: No, 15 to 20 days drilling time.
Unusually deep drilling (high horsepower rig): No, a double drilling rig to drill a vertical pilot hole to 3000' and plug back to 1600' and kickoff a single lateral horizontal (Heath Formation) 4833' MD/2396' TVD.
Possible H2S gas production: Slight chance of H2S.
In/near Class I air quality area: No class I air quality area.
Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns – using triple derrick rig to drill to a vertical pilot hole to 3000' and plugback and kickoff a single lateral horizontal (Heath Formation) 4833' MD/2396' TVD4833' .

Water Quality

(possible concerns)
Salt/oil based mud: Yes, mainhole for intermediate string and horizontal lateral will be drilled with oil base invert drilling fluid. Surface hole will be drilled with freshwater and freshwater drilling mud.
High water table: No high water table in the area of review.
Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral drainage to Yellow Water Reservoir, about 1/4 of a mile to the south from this location. Yellowtail Reservoir is about 1 mile to the south from this location.
Water well contamination: No, nearest water well is about 1 mile to the northwest from this location. Depth of this water well is 1745'. This well will set 9 5/8" surface casing to 1450' and cement to surface. Surface hole will be drilled with freshwater and freshwater drilling mud.
Porous/permeable soils: No, silty sandy bentonitic soils.
Class I stream drainage: No

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)

__ Other: _____

Comments: 1450' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used on surface hole. Oil based invert drilling fluid will be used below surface casing and for the horizontal lateral. Oil based invert drilling fluids will be recycled. Completion fluids will be evaporated in the lined pit. Freshwater drilled cuttings/mud solids and oil based invert drill cuttings will buried in the lined pit. Solids will be mixed with subsoil clays and buried in the lined pit. Lined pit will backfilled when dry. No concerns.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: No stream crossings require.

High erosion potential: No, small cut, up to 7.6' and small fill, up to 7.6', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, approximate location size is 300'X300', required.

Damage to improvements: Slight, surface use appears to be grassland.

Conflict with existing land use/values: Slight

Mitigation

__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be from existing county road and ranch trail. Short road to be built from trail access into location, about 1278'. Freshwater drilled cuttings and mud solids will buried in the lined pit. Lined pit will backfilled when dry. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Residence, none within 1 mile in any direction from this location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Small drilling rig/short 15 to 20 days drilling time.

Mitigation:

_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Operational BOP and adequate surface casing should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Threatened or endangered species identified are the Pallid Sturgeon and the Black Footed Ferret. Proposed species is the Mountain Plover. Species of concern, Greater Sage Grouse and Sprague's Pipit. NH tracker site lists the following: Black tailed Prairie Dog, Grasshopper Sparrow, Golden Eagle, Great Blue Heron, Burrowing Owl, Chestnut-collared Longspur, Greater Sage Grouse, Loggerhead Shrike, Long-billed Curlew, Sage Thrasher, McCown's Longspur and Brewer's Sparrow.

Mitigation:

__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____

Comments: Private surface lands. Contact surface owner for Greater Sage Grouse concerns. Surface damage agreement made with the surface owner. Sage Grouse Mitigation for Oil & Gas Operations on School Trust Lands (November 2007) requires a ¼ mile buffer around active Leks and time restrictions apply. This well is more than ¼ mile from the nearest Lek.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites None identified

Mitigation

__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____

Comments: Private surface lands. No concerns.

Social/Economic

(possible concerns)

__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation

Comments: Well is a wildcat, until production is established no social or economic impact can be assessed.

Remarks or Special Concerns for this site

Well is a wildcat vertical pilot hole to 3000' and plugback and kickoff a single lateral horizontal (Heath Formation) 4833' MD/2396' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki
(title:) Chief Field Inspector
Date: February 18, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology GWIC website
(Name and Agency)
Petroleum County water wells
(subject discussed)
June 20, 2010
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Petroleum County
(subject discussed)

June 20, 2010
(date)

Ms. Windy Davis, Montana FWP
(Name and Agency)
Greater Sage Grouse Leks in Petroleum County, Montana
(subject discussed)
July 12, 2010
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T13N R25E
(subject discussed)

February 18, 2011
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: __ _____
Others present during inspection: __ _____